ERIC Document Resume	See Instruction Sheet	DATE OF RESUME 8/10/65	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.
ED000437	7189	N.A.

4. AUTHOR(S):
a) N.A.

5. TITLE OF DOCUMENT ABSTRACTED:
A Report on the Freshman Honors Students at the University of Michigan - Fall 1957

6. PUBLICATION TITLE:
N.A.

7. EDITOR(S):
N.A.

8. PLACE OF ORIGIN
ORG.
ST. Univ. of Michigan
CITY, STATE Ann Arbor, Michigan

9. PUBLISHER OR SOURCE
University of Michigan

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	58	31

TELE. EXT.
INST/LOC CODE

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
survey

16. INDEXING TERMS (6-12)

surveys	honors programs	evaluation		
students	liberal arts	measurement		
talent	ability	curriculum		
		counseling		

17. ABSTRACT (MAX. 250 WORDS)

Report on freshman students in the honors program in the College of Literature, Science, and the Arts (LSA), 1957–58. Comparisons were made with a randomly selected control group of LSA freshmen, in the same sex ratio. Some major findings were: The honors group was definitely superior to the control group, both in respect to test scores and grade point averages; honor students earned higher grades in honors sections than in "open" sections; test scores and high school percentile rank predicted less accurately for honors students than for control students; honors students and control students tended to take somewhat different course patterns during their first semester; and counselor predictions for 67 honors students showed little validity with respect to grade-point average—almost all test variables provided more accurate predictions.

ERIC No.	18. SOURCE OF ABSTRACT		
	C. FUNDING DATA		
	19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
		22. TOTAL COST OF PROJECT	
		23. DURATION OF PROJECT	U.S. Department of Health, Education, and Welfare Office of Education

ERIC Form 1

IV-14

IV-14

UNIVERSITY OF MICHIGAN

Bureau of Psychological Services
Evaluation and Examinations Division

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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"A Report on the Freshman Honors Students at the University of Michigan - Fall 1957"

October 1958

122 Rackham Building

ED000437

Freshman Honors Students, Fall 1957-58

College of Literature, Sciences and the Arts

Abstract

A study was conducted of the 152 Fall 1957-58 LSA freshman honors students at the University of Michigan. They were compared with a control group of 304 randomly selected LSA freshmen, in the same sex ratio. An analysis was also made of two subgroups of the honors students, one group of 45 were selected for the honors program but did not meet the test and high school percentile rank (HSPR) criterion used by the Evaluation and Examinations Division; the other group of 107 selected for the honors program also met the multiple test- HSPR criterion used by the Evaluation and Examinations Division. Also studied were 63 "almost selected" who were considered by the Honors Council for the Fall '57-58 honors program, but were finally rejected; 33 who met the multiple test-HSPR criterion for honors-level material but who were not selected for the fall program; 48 who earned a grade-point average (GPA) of at least 3.50 in the fall, and who accepted honors classification for the Spring semester (subsequently these will be referred to as the "spring-accepted" group); and 45 who also earned at least a 3.50 GPA in the fall but who declined honors classification. No individual in the honors group of 152 appeared in any of the other groups mentioned; however, the same individual might appear in more than one of the other groups.

For the purpose of this study the criterion was fall semester GPA. Test scores, HSPR, and personal information and principals' predictions from the application blanks were examined for predictive value for all groups. Predictions by the special honors counselors, evaluations by the instructors, and "academic personality" or "academic motivation" scores from the Opinion, Attitude, and Interest Survey (OAIS) were obtained for the fall honors group only.

The Major Findings:

1. The honors group was definitely superior to the control group both in respect to test scores and GPA.
2. The honors students earned higher grades in their honors sections than in "open" sections.
3. Among the honors students, test scores and HSPR predicted less well than for the control students./ For the honors students the most accurate predictions were made by the Academic Personality scale of the OAIS. For the control students the English Proficiency Test and Accuracy of Reading scale was best.
4. For the control group, which most closely corresponds to the general freshman population, the test scores and HSPR almost always predicted better than did personal information and principals' predictions. In general, this was also true for the honors students and other sub-groups.
5. The 45 honors students who did not qualify under a multiple test-HSPR criterion performed no better than 33 students who qualified but were not selected for the program.
6. Honors students and control students tend to take somewhat different course patterns during their first semester; Honors students tended to take math or philosophy; the controls tended to take a social science.
7. Counselor predictions for the 67 honor students for whom predictions were made demonstrated little validity with respect to GPA; almost all test variables provided more accurate predictions.

Tables

1 92 Honors Students and 133 Control Students Compared on 15 Variables (1-12, 22-24).

2. Course Election Patterns for Honors and Control Students, and Performance of Students in Each Pattern.

3. 95 Honors Students Who Took the OAIS Compared with 42 Honors Students Who Did Not (Variables 1-18).

4. 67 Honors Students for Whom Honors Counselor Predictions Were Available (Variables 1-12, 19-24).

5. Academic Achievement of Selected Groups, Fall Semester 1957-58.

6. 40 "Unqualified on Test Criterion but Selected" Honors Students (Group B) Compared with 25 "Qualified on Test Criterion but Unselected" Freshmen (Group D).

7. 97 "Qualified on Test Criterion and Selected" Honors Students (Group A) Compared with 49 "Almost Accepted" Freshmen (Group C).

8. 36 "Spring-accepted" Students (Group E) Compared with 37 "Spring-declined" Students (Group F)

9. 137 Honors Students Compared with 223 Control Students.

10. Honors and Control Students Compared on Miscellaneous Variables.

11. Honors and Control Students Compared on Three Tests.

Additional tables are to be found in the appendix (Page 24).

I Comparison of Honors and Control Students

The fall 1957-58 freshman students in the LSA Honors program were studied in relation to a number of variables on which they were compared with a control group of the same sex ratio.

The control group was obtained by taking from the alphabetical list of freshmen entering LS&A for each honors student, the next two non-honors students of the same sex as the honors student. This gave a control group of 304, as compared with the honors group of 152.

Complete information for all of these freshmen was unavailable so most of the comparisons made between the groups are based on less than 152 honors and 304 control freshmen.

Table 1 presents a summary comparison of the 92 honors students and the 133 control students for whom satisfactory information was available on each of 15 variables. (Subsequent tables will provide data on larger numbers of the two groups of students, but a smaller number of variables will be involved.)

An inspection of the means and standard deviations (SD's) indicates that these honors students are clearly superior to the control students on the basis of test scores, HSPR, and first semester GPA. Not only are the mean scores for the honors group higher, but the SD's are lower (except for ACE-Quantitative aptitude test score and Reading Speed score) indicating a more homogeneous group. These differences are to be expected since the honors students were selected primarily on the basis of test scores and HSPR.

An especially valuable summary statistic for comparison purposes is found in the column entitled "percentage overlap." This statistic is the estimated percentage of the lower group (in this case, the controls) who exceeded the mean of the upper group. The low percentage overlap on variables 1-9 clearly indicates the superiority of the honors students. The percentageoverlap increases decidedly on the non-test variables, except for the principal's estimate of success.

The ultimate criterion in this study was the first semester GPA (variable 8). Here the honors students attained an average one full letter grade higher than that of the controls, with only an estimated 5% of the control students exceeding the honors mean.

Interesting results emerge when the variables are correlated with GPA. For the control group all of the tests and HSPR correlate positively with GPA, the correlations ranging from .22 (ACE-Linguistic) to .39 (English Proficiency Test). For the honors students these variables are less strongly correlated with GPA (except for ACE-Linguistic, and Reading Speed which is negatively

Table 1. 92 Honors Students and 133 Control Students Compared on 15 Variables (1-12, 22-24)

Variable	Correlation Coefficient *															%age Over-Lap	92 Honors		133 Controls	
	1	2	3	4	5	6	7	8	9	10	11	12	22	23	24		Mean	SD	Mean	SD
1. ACE-Quantitative		20	73	-19	07	01	03	02	14	16	12	-02	--	01	-09	11	57.46	7.85	47.85	7.72
2. ACE-Linguistic	31		82	56	39	22	19	30	16	25	10	23	--	22	-18	2	96.23	9.36	73.91	12.67
3. ACE-Total	70	90		28	31	16	15	22	20	27	14	14	--	16	-18	2	153.68	13.36	121.76	16.77
4. Reading-Vocabulary	15	78	66		20	28	24	25	-08	04	04	26	--	14	07	3	41.43	6.83	26.05	9.97
5. Reading-Speed	26	67	62	52		41	16	-10	01	15	07	07	--	09	-14	4	42.87	8.52	28.08	8.74
6. Reading-Accuracy	17	50	46	49	67		30	13	-05	02	01	06	--	-07	10	6	85.43	6.50	70.92	11.77
7. English Proficiency	26	48	48	41	53	56		22	06	13	10	04	--	03	06	5	37.42	3.84	29.30	5.82
8. GPA	31	22	30	25	34	36	39		08	18	12	11	--	03	11	5	3.30	.56	2.30	.66
9. HSPR	18	08	14	-01	25	23	22	26		-05	06	-10	--	25	-13	23	91.51	11.49	81.41	14.86
10. Length Life Story	-03	-09	-08	-09	-16	-05	04	-04	-07		07	11	--	11	09	51	1.74	.75	1.77	.67
11. Personal Character.	02	-20	-14	-18	-05	-04	-06	16	19	-04		09	--	-03	-05	42	5.60	1.64	5.23	1.85
12. Father's Occup Level	-05	08	04	12	01	06	11	01	-30	-03	-01		--	34	32	47	6.86	1.48	6.73	1.48
22. Principal's Recomm.	-14	-05	-10	-02	-07	-04	-03	01	01	-04	-08	03		--	--	43	3.00	.00	2.93	.71
23. Prin Est. of Success	11	23	23	17	15	20	21	19	34	-01	06	21	51		05	9	3.89	.43	2.85	1.17
24. Prin Est of Yr in Coll.	08	10	11	19	17	10	05	08	-09	-11	01	12	-03	07		35	4.49	.91	4.20	.62

*Correlations below the diagonal are for the 133 control students.

correlated[1].)

It is appropriate to emphasize here that the correlations for the control group are the ones which most accurately reflect the true predictive validity of the variables being investigated since the control group is the least selected. Variables which do not correlate substantially with GPA for a representative sample of LSA students cannot subsequently be depended upon to improve the selection of honors students.

It is also important to point out that the test variables are actually better predictors than would appear from Table 1. As previously indicated the honors group had been selected(and the control group rejected for the honors program) primarily on the basis of these or similar variables. For example a number of honors students (e.g., General Motors scholarship winners) were selected on the basis of the College Entrance Examination Board Scholastic Aptitude Test (SAT) and the National Merit Scholarship Qualifying Test (SQT) which correlate highly with the ACE and other tests routinely administered to entering freshmen at Michigan. Because of this selection factor the correlations with GPA are lower than they would be for the LSA freshmen as a whole.

The following 3 figures based on data from 137 honors students and 223 control students illustrate the point.

Variables 10-12 and 22-24 in Table 1 were obtained from the students' applications for admission. In general, these were positively but weakly correlated with the criterion, and tended to be less valid than the test scores and HSPR, especially for the control group. For example the correlation between the principal's estimate of success (variable 23) and GPA was only .19 but the correlation between HSPR (an item of information presumably known to the principal) and GPA was .26. The correlation between the principal's recommendation for admission and GPA was .01.

In this connection it is interesting to note that for these control freshmen the principal's estimate of success correlated only .51 with his recommendation for admission. (On most of the other tables, the correlation was substantially lower.) Not only are the principal's statements not closely related to GPA but also they are not closely related to each other; there is evidence of inconsistency.

For the Honors group the most predictive variable was the number of pages the student used to tell his life story [illegible] the application form. The correlation with GPA was .18, and the correlations with most other variables were positive. But for the control group the correlation between length of story and GPA was -.04, and the correlations with most other variables were

---

[1] The negative correlation between Reading Speed and GPA for this group of superior 1957 entrants is probably due to chance. An analysis was made of the relationship between Reading Speed and GPA for an equally able group of 141 1956 entrants and a negative correlation was not found. (The 141 1956 entrants comprised one of four groups of able students described in A Report on the Academic Performance of Superior LSA Freshmen - Fall 1956 prepared and distributed by the Evaluation and Examinations Division in August 1957. Copies of this report are available on request.)

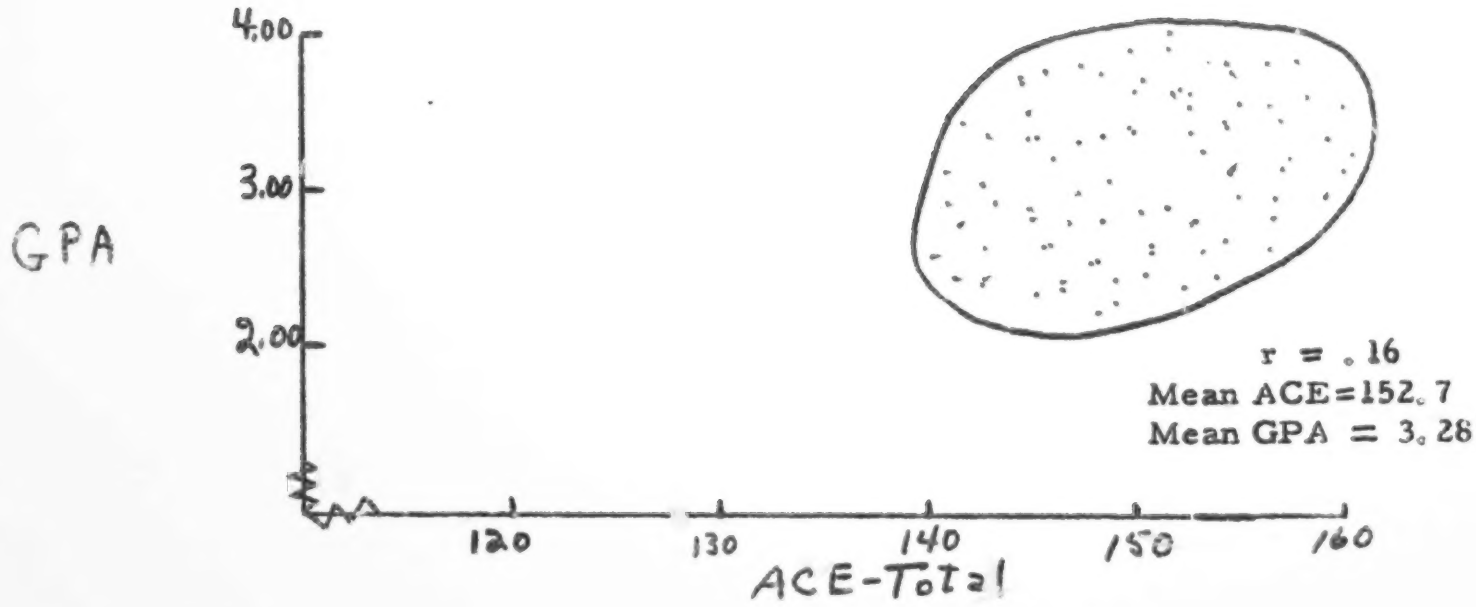

Fig. 1. Relation of GPA to ACE-Total for 137 Honors Students

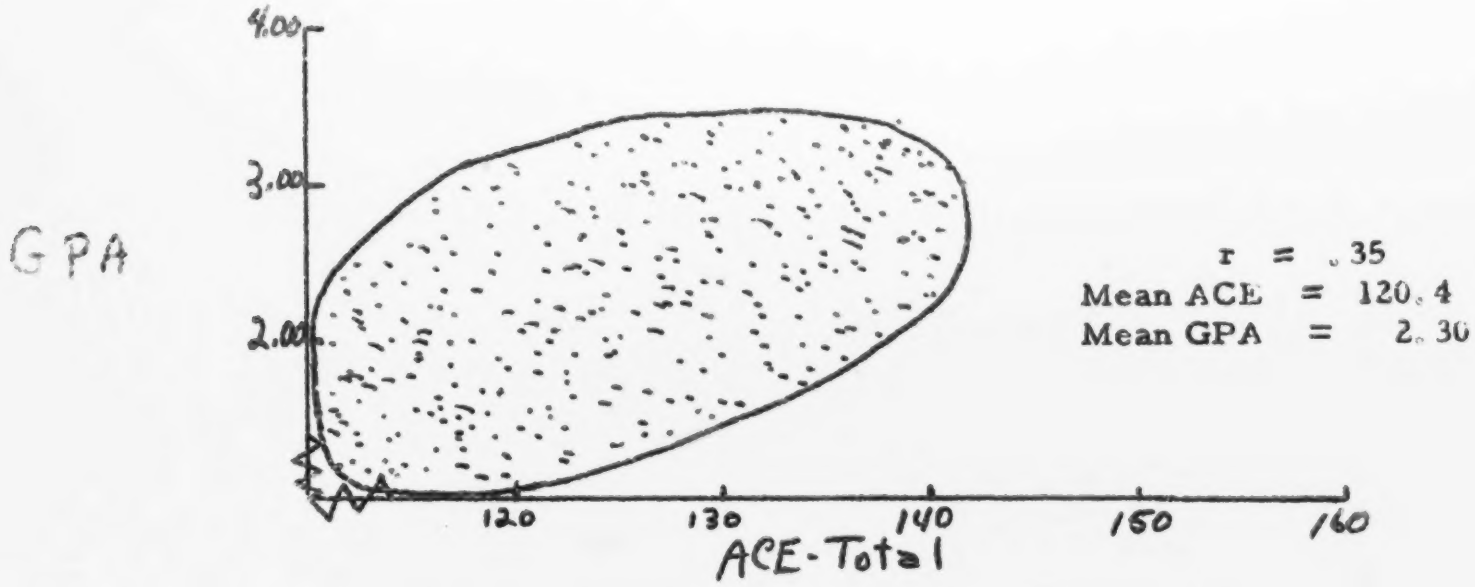

Fig. 2. Relation of GPA to ACE-Total for 223 Controls

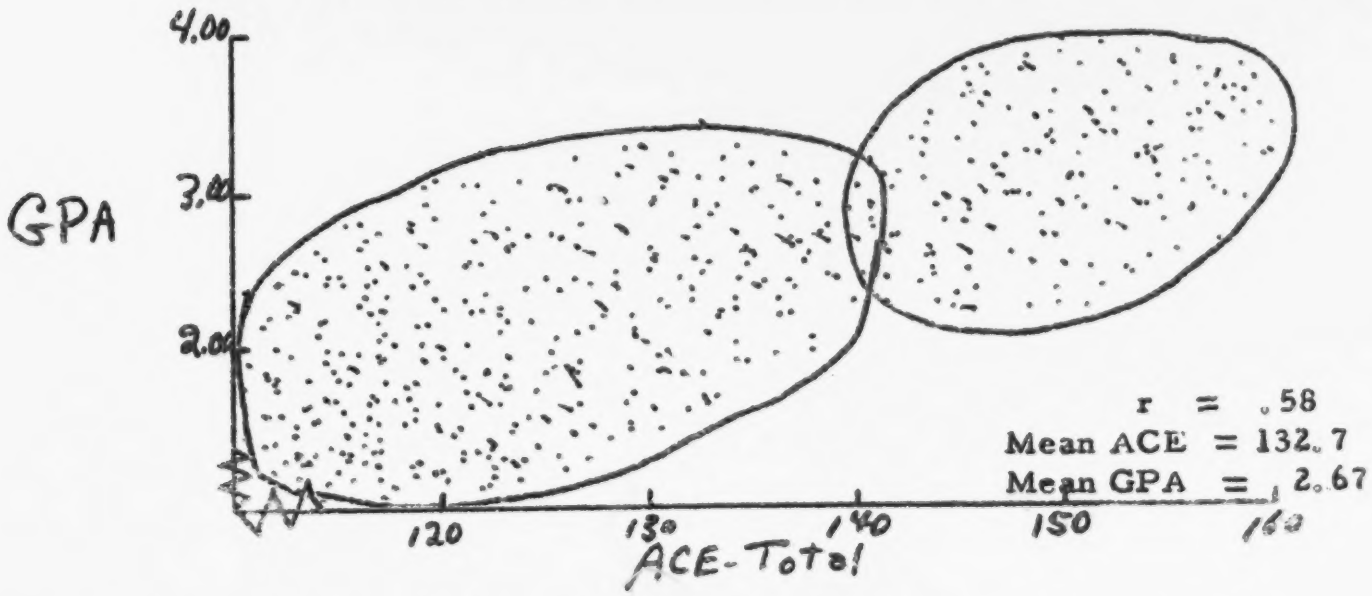

Fig. 3. Relation of GPA to ACE-Total for a Combined Group of 360 (137 Honors and 223 Controls)

negative. It would seem that length of story is not a fruitful variable on which to select honors students.

From the data in Table 1 and other tables in the report it is clear that the non-test variables studied provided correlations with GPA that were low and unpredictable from group to group, suggesting that they may tend to be more chance correlations than systematic relationships.

Table 2 compares the total honors and control group as to the number of each group selecting certain course patterns for their first semester. Pattern 1 (language, natural science, social science) was elected by 20% of the honors students, but by 40% of the controls. Pattern 2 (language, natural science, mathematics or philosophy) was elected by 28% of the honors students and by 19% of the controls. Pattern 11 (unified science--in most cases a special case of Pattern 2) was elected by 10% of the honors but only by 2% of the controls.

The groups electing each pattern are compared with respect to average ACE, HSPR, and GPA. But the statistics in Table 2 are difficult to interpret because (a) the number of students electing most of the patterns is far too small to draw defensible inferences and (b) courses of quite different difficulty are lumped together in the same pattern. (The lengthy report on Student Quality, Freshman Grades, and the Admissions Problem at the University of Michigan prepared and distributed by the Evaluation and Examinations Division, March 1958, provides data on the extent to which freshman courses vary in difficulty.)

Table 2. Course Election Patterns for Honors and Control Students and Performance of Students in Each Pattern

Course Pattern	N		Percentage		Mean					
					ACE-Total		HSPR		GPA	
	Hon	Cont	Hon	Cont	Hon	Cont	Hon	Cont	Hon	Cont
1. Lang, Nat Sc, Soc Sc	29	120	20	40	157.3	118.3	92.9	81.4	3.40	2.39
2. Lang, Nat Sc, Math	41	58	28	19	154.2	124.2	94.6	83.1	3.36	2.22
3. Lang, Nat Sc, Hum	10	17	7	6	154.0	126.9	94.4	81.4	3.39	2.57
4. Lang, Soc Sc, Math	22	47	14	16	152.5	120.0	91.7	82.3	3.06	2.31
5. Lang, Soc Sc, Hum	10	20	7	7	143.7	123.0	93.8	79.4	3.01	2.44
6. Lang, Math, Hum	5	7	3	2	148.8	124.0	93.5	87.3	3.16	2.76
7. Nat Sc, Soc Sc, Math	2	1	1	0	141.5	122.0	96.0	----	3.50	3.50
8. Nat Sc, Soc Sc, Hum	3	0	2	0	154.7	----	96.0	----	3.80	----
9. Nat Sc, Math, Hum	2	1	1	0	148.0	116.0	93.0	----	2.35	----
10. Soc Sc, Math, Hum	1	0	0	0	132.0	----	99.0	----	3.70	----
11. Unified Science	16	5	10	2	144.2	129.4	92.9	86.8	3.18	2.35
12. Miscellaneous	9	19	6	6	155.7	109.8	93.7	84.1	3.18	2.03
13. No Information	2	9	1	3	165.5	116.3	93.5	88.6	3.70	2.18
Total	152	304	100	101	152.5 (N 151)	120.2 (N 304)	93.5 (N 141)	82.4 (N 251)	3.27 (N 152)	2.27 (N 294)

II. Predictive Value of Other Variables for the Honors Students

In addition to the variables on which the control and honors students were compared, information on certain variables was available only for the honors group.

Table 3 presents data on 95 honors students who took the Opinion, Attitude, and Interest Survey (OAIS), a personality inventory designed for use with college freshmen. Variables 13 - 18 are scores from the OAIS; the first 12 variables were also involved in Table 1. Of most interest for this study are the two measures of "academic personality" or "academic motivation;" these scales were constructed for the purpose of predicting freshman grades and discriminating between good and poor students. Variable 14 is the original Academic Personality (AP-Old) scale and variable 15 (AP-New) is a revision of it. They provided correlations of .28 and .34 respectively with GPA. Of all variables considered in the investigation, the AP-New scale proved to be the best single predictor for the honors students. Also worthy of note is the fact that the correlations between the AP scores and the standard grade predictors tend to be near zero; this indicates that the personality inventory is tapping something in students that is not tapped by the other devices. It is possible that scores from these personality scales or from similar ones might be useful in the future for identifying students for the honors program, or for deciding between two equally able appearing freshmen.

Table 3 also contains data on 12 variables for 42 honors students for whom OAIS scores were unavailable. An examination of the means shows that in quality and performance these 42 students were almost identical to the 95 students having the OAIS scores. The HSPR of the latter group, however, was higher and so was the number of personal characteristics rated above average by the principal; the occupational level of the fathers of the "No OAIS" group was somewhat higher. The correlations between GPA and the 12 common variables are slightly lower for the "No OAIS" group than for the group who took the OAIS; if the latter group consists of students whose GPA's are more predictable it is possible that the predictive validity of the AP scores is overestimated.

Table 4 presents data on 67 honors students for whom honors counselor predictions and instructor evaluations were available. The counselor grade predictions (variable 19) were usually made at the time of the initial interview with the honors student and before the beginning of the fall semester, but in some cases the predictions were made at a subsequent meeting and after classes were underway. The correlation of the counselor predictions with GPA was .05, lower than correlations provided by most of the tests alone. (This finding that predictions made through human judgment are not superior to predictions made through tests and formulas mechanically employed is not surprising since in no study where they have been compared has human judgment been found superior. It seems that the human judge be he psychologist, psychiatrist, teacher, or other expert, is unable to synthesize the individually valid bits of information and

Table 3. 95 Honors Students Who Took the OAIS Compared with 42 Honors Students Who Did Not (Variables 1-18)

Variable	Correlation Coefficient*																		95 Students with OAIS		42 Students with no OAIS	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Mean	SD	Mean	SD
1. ACE-Quantitative		20	73	-09	11	08	07	-01	-02	03	07	-07	-12	06	-04	10	08	-04	57.23	7.29	56.88	8.17
2. ACE-Linguistic	30		82	61	36	16	13	32	-09	30	15	21	-13	06	04	05	09	15	96.06	8.62	94.48	10.99
3. ACE-Total	74	86		37	32	16	13	22	-08	22	15	11	-16	07	01	09	11	09	153.29	12.36	151.33	15.54
4. Reading-Vocabulary	-12	52	30		36	33	31	21	-15	05	11	26	-08	02	05	01	08	21	41.12	7.32	40.90	7.09
5. Reading-Speed	31	59	58	25		52	17	-14	-16	12	12	03	-06	-02	07	05	-17	19	43.22	10.07	42.40	9.13
6. Reading-Accuracy	00	32	22	24	36		46	14	-02	14	-01	05	-18	01	09	05	-09	19	85.56	7.62	86.36	6.69
7. English Proficiency	02	19	15	-01	14	00		29	01	11	06	15	01	08	23	-02	-02	08	37.57	4.14	36.67	3.65
8. GPA	-01	09	06	-03	-17	12	25		20	23	09	24	-01	28	34	02	08	-11	3.29	.57	3.26	.52
9. HSPR	16	28	28	02	26	09	34	02		-06	-06	-15	-13	15	09	-15	16	-08	94.14	8.89	89.48	12.46
10. Length Life Story	22	22	26	-06	19	-14	05	12	-04		05	07	06	-11	-11	-17	-02	-11	1.74	.74	1.76	.78
11. Personal Character.	06	09	09	12	17	01	27	11	18	13		16	00	-06	-09	-09	04	09	5.84	1.47	4.93	2.21
12. Father's Occup Level	06	27	22	11	15	05	-11	03	-01	09	-13		-03	-06	-20	14	02	13	6.58	1.54	7.12	1.43
13. Emotional Adjust.														-07	20	-32	-27	-03	66.05	13.15		
14. Acad. Person. -Old															64	01	-09	-24	59.96	6.74		
15. Acad. Person. -New																-05	-31	-38	45.12	6.91		
16. Atypical Response																	10	30	12.51	4.14		
17. Response Set (True)																		13	25.58	5.45		
18. Social Undesirability																			23.53	7.57		

*Correlations below the diagonal are for the 42 honors students who have no OAIS scores.

Table 4. 67 Honors Students for Whom Honors Counselor Predictions Were Available (Variables 1-12, 19-24).

Variable	Correlation Coefficient																		67 Honors	
	1	2	3	4	5	6	7	8	9	10	11	12	19	20	21	22	23	24	Mean	SD
1. ACE-Quantitative		29	77	-20	15	05	01	-03	11	15	-04	00	-01	-10	-03	--	02	-14	57.97	8.45
2. ACE-Linguistic			83	52	37	18	16	30	19	33	19	24	24	24	25	--	21	-26	94.73	9.67
3. ACE-Total				23	33	15	11	19	19	31	10	16	15	10	15	--	15	-26	152.70	14.59
4. Reading-Vocabulary					17	32	23	28	-06	11	08	26	42	34	27	--	14	03	41.04	7.21
5. Reading-Speed						42	15	-09	-02	25	25	16	03	-04	-03	--	08	-19	42.18	8.55
6. Reading-Accuracy							39	15	-03	05	13	11	-01	12	13	--	-10	18	84.94	6.59
7. English Proficiency								22	07	09	02	09	03	26	26	--	04	06	37.58	3.97
8. GPA									05	19	05	13	05	60	58	--	00	10	3.24	.59
9. HSPR										-10	03	-09	15	05	03	--	25	-16	90.69	12.81
10. Length Life Story											-11	14	-02	-01	03	--	12	03	1.69	.72
11. Personal Characteristics												19	05	06	14	--	-02	-07	5.72	1.45
12. Father's Occup. Level													16	07	14	--	38	32	6.81	1.53
19. Counselor Prediction														28	18	--	35	14	3.06	.64
20. Instructor Evaluation															-31	--	01	19	3.22	1.02
21. English 23 Grade																--	11	-01	3.15	.70
22. Principal's Recommen.																	--	--	3.00	.00
23. Prin Estim of Success																		05	3.85	.49
24. Prin Est of Yr in College																			4.43	.88

come up with more accurate predictions than a mechanical combination and use of a few pertinent elements. When he departs from the formula predictions made mechanically to take in "special" and additional information he is more often wrong than right.) Table 4 also shows that the correlations of the high school principal's estimate of success correlated .00 with GPA, and HSPR an item of information known to the principal when he made his predictions correlated .05 with GPA. The correlation between the honors counselor predictions and the principal's predictions was .35, higher than all but one other correlation with counselor predictions indicating that the counselor may have been influenced (and misled!) by the principal's prediction.

The second new variable in Table 4 is instructor evaluation (variable 20). Evaluative statements about the honors students were collected from instructors near the end of the semester so it is not surprising that the correlation between these evaluations and GPA is relatively high (.60). As is to be expected the correlations between tests and instructor evaluations are similar to the correlations between tests and instructor grades (GPA).

The third new variable in Table 4 is English 23 grade (variable 21). The correlational results for this variable resemble those for instructor evaluations, and for GPA, and merit no special comment.

III. Comparison of Groups Related to the Honors Study

In addition to the 152 honors students and the 304 control students, two sub-groups of honors students and four other groups were also studied.

The two honors sub-groups consisted of the following:

A) Qualified on test criterion and selected: Of the 152 honors students 107 met the multiple test (and HSPR) criterion established to identify by a mechanical procedure the top 7% of the College's entering freshman class.

B) Unqualified on test criterion but selected: Of the 152 students selected for the honors program 45 did not meet the multiple test (and HSPR) criterion referred to above. Some of these students were winners of national scholarships and certificates of merit.

Two groups considered or identified as possible fall semester honors students consisted of the following:

C) Almost accepted: Sixty-three students were considered for the fall honors program but were not accepted. Some of these students were accepted in the spring for the honors program.

D) Qualified on test criterion but unselected: Thirty three students were identified by the multiple test (and HSPR) criterion as being among the top 7% of the College's entering freshman class but were not selected for fall honors. Some of these Group D freshmen are included in Group C, and some were accepted in the spring for the honors program.

Two groups of high achieving fall semester freshmen (GPA of at least 3.50) invited to join the honors program in the spring consisted of the following:

E) Spring-accepted: Forty eight students accepted the invitation to become honors students for the spring semester.

F) Spring-declined: Forty five students declined the invitation to join the spring honors program.

Table 5 shows the performance of the six groups, as well as that of the total honors and total control groups. It is apparent that the honors students obtained higher grades in honors sections than in "open" sections, 3.44 versus 3.16.[1]

The GPA of the "Qualified on Test Criterion and Selected" group (Group A) is higher than the GPA of the "Unqualified on Test Criterion but Selected"

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[1] The "open section" GPA of 3.16 for the Fall 1957-58 Honors Freshmen is almost identical to the GPA (3.14) obtained by an approximately equivalent group of Fall 1956-57 freshmen described in A Report on the Academic Performance of Superior LSA Freshmen - Fall 1956.

group (Group B) in both honors and open sections. While the total GPA (3.09) of the latter group is slightly higher than the GPA (3.06) of the non-honors group which was "Qualified on the Test Criterion but Unselected" (Group D) the GPA of Group B students in the open courses (2.97) is lower. It seems reasonable to believe that if the Group D students had been in honors sections their total GPA would have been higher than that of Group B.

Table 5

Academic Achievement of Selected Groups, Fall Semester, 1957-58

Group	N	GPA			Total Hours	Total Grade Points	Honors Hours	Honors Grade Points
		Total	Honors Section	Open Section				
All Honors	152	3.26	3.44	3.16	2318	7558	828	2852
A	107	3.33	3.51	3.23	1645	5476	568	1996
B	45	3.09	3.29	2.97	673	2082	260	856
C	63	2.78		2.78	928	2579		
D	33	3.06		3.06	451	1379		
E	48	3.62		3.62	713	2578		
F	45	3.56		3.56	674	2401		
All Controls	304	2.29		2.29	4333	9924		

The "Almost Selected" group (Group C) did not do nearly as well as the other three groups who were identifiable before the fall semester began. It is surprising to see that the "Spring-Accepted" and "Spring-Declined" groups (Groups E and F) do not differ appreciably in fall semester GPA.

Tables 6, 7, 8, and 9 present a more detailed description of the groups. However, the number of students in each group for whom complete information was available on the 12 variables usually is too small to justify drawing inferences from the correlation coefficients. Table 6 compares Group B (Unqualified on Test Criterion) with Group D (Qualified on Test Criterion but Unselected). Table 7 compares Group A (Qualified on Test Criterion and Selected) with Group C (Almost Accepted). Table 8 compares Group E (Spring Accepted) with Group F (Spring Declined).

Table 6. 40 "Unqualified on Test Criterion but Selected" Honors Students (Group B) Compared with 25 "Qualified on Test Criterion but Unselected" Freshmen (Group D).

Variable	Correlation Coefficient *												40 Group B		25 Group D	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		26	68	-12	19	-15	-06	-32	-21	14	-36	-10	53.13	6.76	54.16	7.82
2. ACE-Linguistic	06		89	46	41	05	-16	-01	-14	08	12	33	88.00	10.69	93.40	8.71
3. ACE-Total	69	76		30	40	-03	-15	-16	-21	13	-08	20	141.13	14.05	147.56	12.06
4. Reading-Vocabulary	-11	77	49		38	40	13	12	-24	-12	17	22	38.80	8.09	37.64	7.27
5. Reading-Speed	02	69	51	50		55	27	-14	-19	-07	18	06	37.20	7.77	42.92	8.69
6. Reading-Accuracy	02	47	35	37	66		47	30	-14	-17	00	25	83.58	9.36	82.60	7.58
7. English Proficiency	11	23	24	29	46	59		19	04	-12	21	07	35.85	4.59	36.64	3.73
8. GPA	41	-01	26	00	-11	04	08		-08	14	02	43	3.09	.55	3.00	.55
9. HSPR	12	-02	06	-13	-10	-45	-42	36		-38	18	-28	87.93	16.19	94.76	4.57
10. Length Life Story	-18	19	01	18	08	06	07	47	18		-18	00	1.48	.67	1.84	.73
11. Personal Characteristics	11	-38	-20	10	-23	30	-14	31	48	15		01	5.12	1.72	4.80	2.30
12. Father's Occup. Level	-20	-24	-30	11	-28	00	-01	19	-26	30	-11		6.62	1.59	6.92	1.38

*Correlations for the 25 Group D students are below the diagonal.

Table 7. 97 "Qualified on Test Criterion and Selected" Honors Students (Group A) Compared with 49 "Almost Accepted" Freshmen (Group C).

Variable	Correlation Coefficient *												97 Group A		49 Group C	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		-02	73	-21	01	06	00	00	11	-03	15	-03	58.77	7.27	54.02	6.75
2. ACE-Linguistic	03		67	64	27	20	21	26	02	24	03	14	98.70	6.73	87.80	11.88
3. ACE-Total	52	87		28	19	18	14	18	10	14	13	08	157.46	9.80	141.82	13.86
4. Reading-Vocabulary	-15	76	58		24	19	25	10	-06	01	05	20	41.98	6.66	34.39	8.89
5. Reading-Speed	01	72	62	55		41	01	-30	-12	10	06	04	45.35	9.55	38.45	8.87
6. Reading-Accuracy	-13	39	27	49	48		18	-03	11	13	-08	-08	86.72	6.12	81.57	8.82
7. English Proficiency	07	34	26	30	30	54		28	16	11	08	04	37.89	3.59	35.24	4.60
8. GPA	-07	-08	-04	-11	08	05	10		29	16	08	05	3.36	.54	2.74	.70
9. HSPR	-01	10	09	-02	01	-24	-01	29		08	-06	-03	94.68	5.46	88.45	12.84
10. Length Life Story	06	19	19	08	04	04	-09	16	05		12	09	1.86	.76	1.80	.76
11. Personal Characteristics	06	-13	-08	-03	-09	-11	23	11	01	11		00	5.74	1.77	5.10	2.29
12. Father's Occup. Level	-17	-09	-16	02	-13	-15	-01	-22	-24	18	-11				6.86	1.49

*Correlations for the 49 Group C students are below the diagonal.

Table 8. 36 "Spring-accepted" Students (Group E) Compared with 37 "Spring-declined" Students (Group F)

Variable	Correlation Coefficient *												36 Group E		37 Group F	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		04	61	-11	-26	-38	-18	00	-08	-10	-05	34	52.53	6.91	50.59	6.88
2. ACE-Linguistic	-06		82	73	66	22	33	37	-11	08	-23	03	85.08	9.49	81.92	9.72
3. ACE-Total	52	81		52	37	-04	16	29	-13	00	-21	22	137.61	11.98	132.51	11.89
4. Reading-Vocabulary	-07	70	53		57	29	60	48	-05	06	-20	06	33.58	5.90	31.38	8.24
5. Reading-Speed	00	28	21	28		48	49	24	-15	00	-19	04	35.42	8.64	32.14	6.03
6. Reading-Accuracy	09	17	19	27	58		46	16	-09	-13	-19	-10	80.56	9.04	75.81	9.00
7. English Proficiency	04	32	30	34	15	53		21	-09	00	-10	20	34.44	4.72	34.43	4.27
8. GPA	-06	-29	-28	-02	-07	-03	00		-30	05	-11	38	3.60	.18	3.55	.17
9. HSPR	-13	-21	-24	-16	-11	-18	-05	37		26	05	-28	92.14	8.97	91.86	8.99
10. Length Life Story	-13	28	15	37	-07	03	15	-15	-02		-52	21	1.83	.73	1.95	.73
11. Personal Characteristics	06	02	06	06	23	17	16	06	16	02		-22	5.47	1.79	5.46	1.44
12. Father's Occup. Level	-43	01	-22	-11	-07	-27	-21	-13	-03	00	-04		6.92	1.38	7.03	1.15

*Correlations below the diagonal are for the 37 Group F students.

Table 9. 137 Honors Students Compared with 223 Control Students.

Variable	Correlation Coefficient *												137 Honors		223 Controls	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		24	73	-10	17	05	06	-01	06	09	07	-03	57.12	7.57	46.78	8.40
2. ACE-Linguistic	32		84	57	44	20	15	24	09	26	14	21	95.58	9.44	73.69	12.75
3. ACE-Total	72	89		34	40	17	14	16	09	23	13	13	152.69	13.45	120.47	17.38
4. Reading -Vocabulary	17	76	64		33	31	24	15	-09	02	11	21	41.05	7.25	25.51	9.65
5. Reading-Speed	26	69	63	54		47	17	-15	00	14	14	06	42.97	9.80	27.25	8.64
6. Reading-Accuracy	20	52	48	50	70		34	13	01	06	-01	06	85.80	7.36	70.19	12.84
7. English Proficiency	33	49	52	48	52	61		28	14	09	15	06	37.29	4.02	28.46	6.13
8. GPA	26	31	35	31	35	38	43		13	20	09	17	3.28	.55	2.30	.71
9. HSPR	12	03	08	-02	20	16	16	35		-06	10	-13	92.71	10.35	81.03	15.96
10. Length Life Story	-05	-02	-04	01	-13	-07	07	00	-06		07	08	1.74	.75	1.78	.70
11. Personal Characteristics	-01	-08	-06	-07	00	04	07	19	30	03		01	5.56	1.78	5.03	2.06
12. Father's Occup. Level	05	01	03	04	-03	-01	05	05	-15	-09	-02		6.74	1.53	6.64	1.54

*Correlations for the 223 control students are below the diagonal.

Table 9 compares 137 Honors and 233 control students on the 12 variables involved in Tables 6, 7, and 8. Since Table 9 contains the largest number of cases analyzed for the two groups it seems appropriate to draw attention to the relative validity of the predictor variables. The best predictors of GPA for the Honors students were the English Proficiency Test ($r = .28$) and the Linguistic subtest of the ACE aptitude test ($r = .24$), and the best predictors for the control students were the English Proficiency Test ($r = .43$) and the Reading Accuracy score ($r = .38$). It would seem that somewhat superior honors students might be selected in the future by giving more weight to these variables, and particularly to the English Proficiency Test, since it proved to provide the highest correlations with GPA for both groups (except that for the 95 Honors students who completed the OAIS the Academic Personality score correlated most highly (i.e., $r = .34$) with GPA, as shown in Table 3).

IV. Other Variables Studied

In addition to the 24 variables considered in Part I of the report, data was gathered on a number of other variables which were not intercorrelated either because (a) information was lacking on too many cases or (b) a preliminary analysis disclosed too little predictive validity to warrant further study of the variable. Tables 10 and 11 summarize some data on these variables.

Some general observations:

1. More information was available for the honors students than for the control students.
2. High school principals were quite lax about filling in all requested information on the application blanks. For example the principals did not estimate how long a college career would be desirable for 10% of the honors students and for 23% of the controls.
3. Honors students were more careful about providing full information than were the control students. The honors students also followed directions more carefully. For example 70% of the honors students but only 53% of the controls followed the directions to type or print their life story.
4. Honors students were more apt to have living fathers working at the professional and upper class levels.
5. The honors students were much more apt to have taken the SAT or SΩT.

It is possible that the differences (or similarities) shown in Table 10 are the result of the method of selecting honors students. For example if a student typed his life story it is possible that he would make a better impression on those who select the honors freshmen and conceivably might be selected over a more able student who did not type his story.

Table 10. Honors and Control Students Compared on Miscellaneous Variables

Variable		152 Honors		304 Controls	
		N	%	N	%
Residence	In-state	91	61	184	64
	Out of state	58	39	102	36
	Total	149		286	
Type of High School	Public	137	91	253	88
	Private	8	5	27	9
	Parochial	5	3	9	3
	Total	150		289	
Working mother	Yes	36	24	57	21
	No	114	76	221	79
	Total	150		278	
Home status	Living with both parents	136	91	248	89
	" " one parent	14	9	27	10
	" " neither parent	0	0	3	1
	Total	150		278	
Form of Life Story	Typed or Printed	105	70	154	53
	Longhand	46	30	138	47
	Total	151		292	
Length of Life Story	1 page	67	44	112	38
	2 pages	57	38	138	47
	3 or more pages	27	18	42	14
	Total	151		292	
Number of Parents and sublings that attended U of M	0	97	64	201	67
	1	37	25	75	25
	2	13	9	21	7
	3	4	3	2	1
	Total	151		299	
No. of Other relatives that attended U of M	0	95	63	189	63
	1	23	15	48	16
	2	14	9	23	8
	3	6	4	11	4
	4	4	3	18	6
	5	3	2	2	1
	6	2	1	2	1
	7	2	1	4	1
	8	2	1	0	0
	9	0	0	2	1
	Total	151		299	

Table 10 Continued

Variable		152 Honors N	152 Honors %	304 Controls N	304 Controls %
Father's Occup. Status	Professional	64	43	93	33
	Managerial	38	26	97	34
	Sales	18	12	26	9
	Clerical	4	3	4	1
	Skilled	16	11	26	9
	Semi-skilled	6	4	18	6
	Domestic	0	0	1	0
	Father deceased	2	1	19	7
	Total	148		284	
Principal's recommendation concerning admission	Recommended	128	100	236	94
	Recomm. under sec. sch-coll. agreement	0	0	2	1
	Rec. upon examination	0	0	12	5
	Total	128		250	
Principal's estimate of college success	Superior	105	92	94	45
	Betw. superior & aver.	3	3	7	3
	Average	6	5	100	48
	Betw. "average" and "will have some diff."	0	0	9	4
	Total	114		210	
Sex	Male	87	57	174	57
	Female	65	43	130	43
	Total	152		304	
Hours attempted (and completed)	19	0	0	1	0
	18	4	3	3	1
	17	16	11	15	5
	16	4	3	4	1
	15	125	82	232	79
	14	0	0	9	3
	13	1	1	2	1
	12	0	0	1	0
	11	2	1	7	9
	Total	152		294	
GPA	4.00	12	8	0	0
	3.50-3.99	67	44	15	5
	3.00-3.49	39	26	42	14
	2.50-2.99	23	15	74	25
	2.00-2.49	6	4	72	24
	2.50-1.99	3	2	58	20
	1.00-1.49	2	1	24	16
	.50-.99	0	0	7	2
	.00-.49	0	0	2	1
	Total	152		294	

Table 10 Continued

Variable		152 Honors N	152 Honors %	304 Controls N	304 Controls %
English 24 Examptions	Exempted by placement	2	1	2	1
	Exempt. by English 23 grades	80	53	29	10
	Not exempt	70	46	258	89
	Total	152		289	
English 23 Grades	A	44	30	8	3
	B	86	58	94	33
	C	16	11	151	52
	D	1	1	32	11
	E	1	1	4	1
	Total	148		289	
Had taken nationally administered aptitude tests	SAT	80	53*	86	28*
	SQT	83	55*	113	37*
	*Percentage of group for whom scores were available.				
Predicted length of college by principal	4 years	99	73	214	90
	5 years	27	20	18	8
	7 years	9	7	5	2
	Total	135		237	
Number of personal characteristics rated average or <u>below</u> by principal	0	62	42	94	35
	1	35	24	45	17
	2	14	10	43	16
	3	17	12	21	8
	4	10	7	30	11
	5	4	3	14	5
	6	0	0	8	3
	7	5	3	13	5
	Total	147		268	

Table 11

Honors and Control Students Compared on Three Tests

	Honors			Controls		
Test	Mean	SD	N	Mean	SD	N
SAT (total)	1331	80.8	80	1039	151.8	86
SQT (total)	94.3	9.44	83	63.8	14.0	113
CQT-N	43.6	6.54	120	32.6	10.90	280

The tests in Table 11 show, as did the other tests, substantial differences between the honors and control students. The differences are to be expected since they provided a major basis for selecting the honors students. The SAT (Scholastic Aptitude Test of the College Entrance Examination Board) and the SQT (Scholarship Qualifying Test used by the National Merit Scholarship Corporation) were administered to the students as part of nationally administered testing programs and before the students arrived on the University campus; the CQT-N (College Qualification Test-Numerical subtest) was administered to most freshmen entering the University in 1957 for experimental purposes. Unlike the variables in Table 10 these test variables were significantly and substantially related to the GPA criterion (to an extent similar to that found for most of the regular freshman tests administered during the orientation program). The three tests were not interrelated with the other test variables and non-psychometric data because few students took them and because they tap traits or attributes already adequately tapped by the tests available for all freshmen.

V. Summary, Conclusions, and Implications

The 152 freshmen selected for the Fall 1957-58 Honors Program were superior to a control sample of non-honors freshmen in first semester GPA by approximately one letter grade on the average. However, some of the honors students (about 5%) achieved GPA's below the average achieved by the control students, and an approximately equal number of control students surpassed the average achievement of the honors students.

According to the GPA criterion it is clear that some students who did not have what it takes were selected for the honors program and some who had what it takes were not selected. Perhaps the major problem to be solved is the identification of these two groups before the first semester begins so that the truly top students are enrolled in the freshman honors program and so that the "weak" ones are not.

It would seem, however, that almost regardless of how 7 or 8% of the LSA freshmen are selected for the honors program, some will get GPA's below 3.00. (About 20% of LSA freshmen obtain a GPA of 3.00 or higher.) Numerous situational and unmeasurable factors prevent some students from performing up to ability expectation (e.g., "falling in love;" being away from home and parental control; a non-academic roommate; etc.)

The low correlations between GPA and the standard grade predictor scores (aptitude and achievement tests and HSPR) and the high mean scores for the Fall 1957-58 honors students indicate that quite good use was made of the selection variables. The low correlations with GPA for these variables show that most of the "valid variance" was removed (i.e., for those selected, "high" and "low" scores on each variable were not very predictive of success or failure.) In other words the honors group was quite homogeneous and able with respect to measured academic potential; there was not much difference between the weakest and the strongest student in the honors group, at least as measured by the standard assessment devices. The main reason some honors students were unsuccessful (e.g., 5 obtained a GPA below 2.00, 11 a GPA below 2.50) and some extremely successful (e.g., 12 had straight A's) is not to be found in their measured ability. However, the fact that some correlation existed between the variables (Table 9 shows the highest correlations were .28 for English Proficiency, .24 for ACE-Linguistic) and GPA make it apparent that those who had the low scores tended somewhat to obtain the low GPA's, etc. That is, measured ability or potential was still a factor conditioning the academic performance of the honors students. Perhaps some slight improvement in the quality of the 1957-58 honors students (as reflected by the GPA criterion) might have resulted from giving a little more weight to the English Proficiency Test and the ACE-Linguistic scores. It is unlikely, however, that any substantial change in the quality (or GPA) of the honors students would accrue from manipulating the standard ability variables.

It is also worth mentioning that one consequence of giving more weight to the two verbal measures (English proficiency and linguistic aptitude) would be the selection of proportionately more women than men since women tend to do

relatively better on verbal tests (e.g., freshman women score substantially lower than the men on the ACE-Quantitative aptitude test). Then too, predicted GPA probably should not be the sole criterion for the selection of honors students. High grades are more easily obtained in some courses than in others; a student with a GPA of 2.93 for example may have accomplished more than another student with a GPA of 3.41 depending on the courses elected.

It is apparent from the analysis of many personal-social biographical data items in the student's Application for Admission that not much of value for the prediction of GPA is to be found there. The principal's estimate of success (Table 1) which might be expected to yield something turns out to provide less valid predictions than the student's HSPR (and considerably less valid predictions than the aptitude and achievement tests). Of more than a dozen "application for admission" variables examined for predictive validity, the best one for the honors students was the "length of the life story" the applicant wrote; Table 9 shows a correlation of .20 with GPA which may or may not be a reliable result. Since the correlation of length of story with GPA is .00 for the control students, it is unlikely that this variable would contribute anything to the selection of superior students.

The most promising "non-academic ability" variable considered in this investigation was the revised Academic Personality score obtained from the Opinion, Attitude and Interest Survey (OAIS). The "AP-New" scale which was designed to reflect the non-intellectual or personality factors which are important in academic success might be of value in choosing among high ability students identified by the standard aptitude and achievement tests (and HSPR). The correlation of .34 between AP-New and GPA (Table 3) is somewhat encouraging. Perhaps other personality inventories or other types of personality tests might also produce significant results. For example a measure of "need-achievement" such as that obtained through the use of Thematic Apperception Test pictures might be worthwhile. Since even the unsuccessful 1957-58 honors freshmen had a substantial amount of whatever is measured by the traditional "intelligence" tests, the "failure" of these students may be due in large part to non-intellectual factors presumably tapped, or, hopefully, "tapable," by personality tests. At least it would seem that more research should be done in this area.

A final point worthy of mention is to be found in the performance of students who would qualify automatically for enrollment in the honors program by virtue of having passed a multiple test (and HSPR) criterion versus the performance of students who are judged by one or more evaluators to be honors calibre. Tables 5 and 6 show that while there is no significant difference in the GPA's of students identified by the two methods the "open section" GPA of students selected by judgment (rather than by a clerk mechanically) was lower. Perhaps some thought should be given to use of a mechanical method in the future. But if the same quality of judgment will be exercised in the future as was exercised in the selection of the Fall 1957-58 freshmen, no gain of consequence can be expected by use of a mechanical method. It is possible that with experience the ability of the judge(s) to select good students will improve. One possible advantage of the mechanical method is that it permits a quantitative examination and evaluation of the success of the selection formula and permits systematic and controlled changes to be made in it. Another advantage, though perhaps a relatively unimportant one is that the selections by a formula can be made more economically.

Appendix

Note: The letter following a table number indicates that the table is a "break-down" of the first table with that number.

Table

1-A. Honors Students Compared by Sex on 15 Variables (1-12, 22-24).

1-B. Control Students Compared by Sex on 15 Variables (1-12, 22-24).

3-A. Honors Students Who Took the OAIS Compared by Sex (Variables 1-18).

3-B. Honors Students Who Did Not Take the OAIS Compared by Sex (Variables 1-12).

4-A. Honors Students for Whom Honors Counselor Predictions Were Available Compared by Sex (Variables 1-12, 19-24).

9-A. Honors Students Compared by Sex (Variables 1-12).

9-B. Control Students Compared by Sex (Variables 1-12).

Table 1-A. Honors Students Compared by Sex on 15 Variables (1-12, 22-24)

Variable	Correlation Coefficient *															56 Men		36 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	22	23	24	Mean	SD	Mean	SD
1. ACE-Quantitative		23	74	25	02	-06	-02	01	27	01	22	-11	--	04	19	58.41	8.10	55.97	7.21
2. ACE-Linguistic	30		82	54	45	21	21	23	29	10	04	26	--	25	-19	94.21	9.48	99.36	8.24
3. ACE-Total	78	83		23	32	11	14	17	36	08	16	11	--	14	-24	152.63	13.80	155.33	12.48
4. Reading-Vocabulary	-04	59	36		25	28	23	21	-05	-06	-04	31	--	17	09	40.88	7.22	42.31	6.08
5. Reading-Speed	26	19	27	10		45	14	-23	12	-05	-03	11	--	06	20	41.00	7.47	45.78	9.21
6. Reading-Accuracy	16	28	28	26	41		35	13	-10	00	10	07	--	-13	10	85.43	7.14	85.44	5.36
7. English Proficiency	20	05	15	22	09	20		18	02	-01	04	05	--	01	05	36.89	3.82	38.25	3.72
8. GPA	05	43	31	34	04	13	28		07	05	13	07	--	09	15	3.27	.59	3.34	.51
9. HSPR	-06	04	-01	-10	-07	03	14	10		-07	15	-12	--	22	-26	92.00	10.62	90.75	12.70
10. Length Life Story	47	39	53	15	28	05	24	37	01		-11	03	--	05	11	1.63	.70	1.92	.79
11. Personal Charact.	06	02	05	14	03	-23	10	04	-05	26		13	---	-05	01	5.23	1.73	6.17	1.28
12. Father's Occup Lev.	18	15	20	12	01	04	-02	17	-05	24	-03		---	32	39	6.80	1.57	6.94	1.31
22. Prin. Recomm.	--	--	--	--	--	--	--	--	--	--	--	--		--	--	3.00	.00	3.00	.00
23. Prin Est of Success	19	09	17	04	09	13	01	-15	36	19	-11	38	--		08	3.86	.48	3.94	.33
24. Prin Est of Yr in College	09	14	14	17	25	16	39	12	15	31	03	23	--	09		4.66	1.09	4.22	.42

*Correlations for the 36 women are below the diagonal.

Table 1-B. Control Students Compared by Sex on 15 Variables (1-12, 22-24)

Variable	Correlation Coefficient *															77 Men		56 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	22	23	24	Mean	SD	Mean	SD
1. ACE-Quantitative		22	63	03	30	12	33	38	17	-08	13	04	--	33	-08	50.18	6.53	44.64	8.06
2. ACE-Linguistic	44		90	77	66	50	40	24	07	-02	-36	05	--	32	-10	73.92	11.50	73.89	14.11
3. ACE-Total	75	92		63	66	45	47	36	13	-05	-23	06	--	41	-12	124.10	14.41	118.55	19.08
4. Reading-Vocabulary	26	80	70		48	43	39	26	01	00	-35	14	--	16	08	26.40	9.59	25.57	10.45
5. Reading-Speed	33	68	65	58		67	46	39	19	-14	-24	-01	--	21	-02	27.32	8.55	29.13	8.90
6. Reading-Accuracy	28	51	50	56	68		47	35	14	-01	-34	13	--	19	01	70.27	10.07	71.80	13.71
7. English Proficiency	34	59	58	47	60	68		45	17	04	-22	05	--	25	-06	28.62	5.91	30.23	5.56
8. GPA	25	20	25	23	29	39	32		33	-03	08	01	--	-30	02	2.32	.65	2.28	6.60
9. HSPR	30	09	20	-04	33	33	28	16		-13	11	-27	--	46	-24	80.44	15.26	82.75	14.20
10. Length Life Story	05	-18	-12	-24	-20	-10	03	-06	01		-03	-08	--	03	-07	1.75	.72	1.79	.59
11. Personal Character.	06	00	04	08	19	29	13	33	29	-06		-05	--	03	-01	4.91	1.94	5.66	1.62
12. Father's Occup Lev	-09	13	05	10	00	-03	16	01	40	05	01		--	-22	16	6.58	1.58	6.93	1.31
22. Prin. Recomm.	-27	-07	-17	-04	-08	-04	-02	01	03	-06	10	-03		--	--	3.00	.00	2.82	1.09
23. Prin Est of Success	-05	16	10	18	-09	21	19	08	24	-05	12	20	66		-04	2.87	.98	2.82	1.39
24. Prin Est of Yr in College	28	33	37	32	42	19	22	17	13	-18	05	06	05	19		4.19	.62	4.20	.61

*Correlations below the diagonal are for the 56 women.

Table 3-A. Honors Students Who Took the OAIS Compared by Sex (Variables 1-18)

Variable	Correlation Coefficient*																		54 Men		41 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Mean	SD	Mean	SD
1. ACE-Quantitative		18	75	-18	04	04	05	-06	08	-02	21	-11	21	-06	-03	01	06	-18	59.30	7.35	54.51	6.24
2. ACE-Linguistic	32		79	66	30	13	12	28	-16	-15	15	18	-18	22	08	16	22	10	95.48	7.92	96.83	9.41
3. ACE-Total	72	89		33	23	11	11	15	-06	08	23	06	01	11	04	11	19	-04	154.78	11.76	151.34	12.86
4. Reading-Vocabulary	17	56	49		34	35	34	18	-15	-03	06	15	-26	20	03	17	29	17	40.13	7.28	42.41	7.18
5. Reading-Speed	32	44	47	37		54	09	-29	-19	-02	18	-03	-16	-11	-05	10	-12	22	42.41	10.16	44.29	9.84
6. Reading-Accuracy	18	19	23	31	49		51	07	00	15	14	-07	-16	04	12	08	-08	18	85.48	8.05	85.66	7.02
7. English Proficiency	39	10	26	25	26	41		29	-07	02	14	12	-07	32	38	-03	-06	05	36.65	4.29	38.78	3.59
8. GPA	12	38	34	26	09	26	30		26	18	15	24	04	47	39	13	10	-13	3.27	.61	3.31	.50
9. HSPR	-18	-05	-12	-15	-14	-04	13	18		02	-06	-09	12	23	04	-05	29	-15	94.81	6.40	93.24	11.31
10. Length Life Story	30	43	46	09	27	14	10	32	-10		-07	10	01	00	-07	04	-02	-21	1.59	.71	1.93	.75
11. Personal Charact.	04	13	11	13	-01	-25	-21	-02	-03	11		21	-04	08	-01	-12	01	-06	5.59	1.48	6.17	1.38
12. Father's Occ. Lev.	10	25	23	43	13	30	16	23	22	-02	03		-23	-02	-19	13	05	23	6.46	1.70	6.74	1.29
13. Emot. Adjust.	-13	-21	-22	-12	-10	-29	-26	-14	-26	-15	-22	13		29	35	-40	-34	-83	60.09	10.86	73.90	11.71
14. Acad. Pers.-Old	-26	-03	-15	-03	27	-04	08	10	05	01	-03	-04	22		71	-10	-07	-29	62.85	6.48	56.15	4.96
15. Acad. Pers.-New	-19	03	-07	12	27	04	11	28	12	-10	-14	-19	28	60		-04	-33	-36	45.93	7.00	44.05	6.65
16. Atypical Response	13	-07	01	-16	03	02	11	-17	-28	-38	05	22	-09	-06	-15		07	42	13.13	4.32	11.68	3.74
17. Response Set (True)	12	-10	-02	-31	-28	-12	10	04	05	01	14	-05	-25	-21	-30	18		15	25.69	6.25	25.44	4.16
18. Social Undesirability	20	21	25	27	14	21	13	-07	-03	-01	30	-04	-78	-25	-42	13	10		23.44	7.65	23.63	7.46

*Correlations for the 41 women are below the diagonal.

Table 3-B. Honors Students Who Did Not Take the OAIS Compared by Sex (Variables 1-12)

Variable	Correlation Coefficient*												26 Men		16 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		41	77	-07	32	03	05	06	15	28	07	-01	57.31	8.19	56.19	8.09
2. ACE-Linguistic	18		90	55	67	30	25	-06	32	19	-02	24	91.65	12.12	99.06	6.66
3. ACE-Total	82	71		36	63	23	20	-02	30	27	02	16	148.96	17.20	155.25	11.36
4. Reading-Vocabulary	-30	68	18		37	31	-03	-05	05	-07	06	20	41.31	8.08	40.25	5.01
5. Reading-Speed	38	14	35	-09		40	21	-28	29	18	04	06	40.96	9.84	44.75	7.24
6. Reading-Accuracy	-03	23	11	04	15		00	13	00	-12	17	-07	85.54	7.26	87.69	5.39
7. English Proficiency	-03	-13	-09	08	-12	-04		25	36	-03	23	-14	36.46	4.07	37.00	2.81
8. GPA	-11	26	08	16	-07	-05	18		01	-03	12	02	3.15	.56	3.44	.38
9. HSPR	25	-06	15	-07	10	31	25	-10		-15	36	-24	88.08	13.86	91.75	9.32
10. Length Life Story	15	23	23	-01	18	-24	18	34	11		-14	-04	1.69	.72	1.88	.86
11. Personal Characteristics	06	22	16	31	37	-35	37	-03	-21	41		-21	4.69	2.03	5.31	2.42
12. Father's Occup. Level	32	05	26	-15	30	30	-09	-24	71	30	-10		6.85	1.59	7.56	1.00

*Correlations below the diagonal are for the 16 women.

Table 4-A Honors Students for Whom Honors Counselor Predictions Were Available Compared by Sex
(Variables 1-12, 19-24)

Variable	Correlation Coefficient*																		41 Men		26 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	19	20	21	22	23	24	Mean	SD	Mean	SD
1. ACE-Quantitative		37	80	-22	11	-03	-02	-02	22	-02	06	-06	00	-13	-02	--	-03	-23	58.93	8.62	56.46	7.94
2. ACE-Linguistic	31		85	49	42	20	19	26	37	19	13	22	23	20	25	--	23	-28	92.61	9.76	98.08	8.52
3. ACE-Total	79	82		19	33	12	11	16	36	11	12	11	15	05	15	--	13	-31	151.54	15.22	154.54	13.33
4. Reading-Vocabulary	-12	57	29		21	35	20	26	01	01	01	28	37	35	36	--	17	04	40.34	7.41	42.15	6.72
5. Reading-Speed	31	18	31	07		46	16	-20	13	03	23	14	-02	-15	-05	--	04	-24	40.37	7.52	45.04	9.28
6. Reading-Accuracy	23	18	25	26	47		35	16	-08	01	23	15	11	10	15	--	-16	20	85.07	7.39	84.73	5.10
7. English Proficiency	13	00	08	23	05	54		17	07	04	-01	08	13	29	24	--	03	05	37.12	4.06	38.31	3.71
8. GPA	00	36	23	29	00	12	29		05	03	03	10	15	62	58	--	06	16	3.20	.63	3.30	.53
9. HSPR	-07	01	-04	-14	-13	05	12	06		09	12	-13	37	03	11	--	22	-30	91.66	11.71	89.15	14.23
10. Length Life Story	48	47	59	20	42	16	11	43	-09		-38	00	-17	-08	-10	--	05	03	1.59	.66	1.85	.77
11. Personal Charact.	-12	02	-06	13	09	-15	-04	02	-04	19		16	03	12	11	--	-05	-02	5.29	1.57	6.38	.92
12. Father's Occ. Lev.	17	21	24	18	14	02	05	15	-01	30	14		20	05	12	--	34	39	6.66	1.62	7.04	1.34
19. Counselor Pred.	-04	32	18	52	09	-24	-09	-10	71	15	15	12		37	33	--	41	12	3.07	.60	3.04	.71
20. Instruct. Eval.	-06	44	25	35	18	19	23	56	06	16	-03	13	12		41	--	08	18	3.27	1.13	3.15	.82
21. Engl 23 Grade	08	03	07	-03	-20	12	22	58	-02	14	-14	08	04	12		--	06	09	3.00	.73	3.38	.56
22. Princ. Recomm.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	3.00	.00	3.00	.00
23. Prin Est of Success	21	07	17	03	09	11	02	-19	35	22	-13	45	29	-21	14	--		07	3.80	.55	3.92	.38
24. Prin Est of Yr in College	-02	03	01	16	10	12	35	-02	12	22	22	28	25	27	-16	--	10		4.59	1.06	4.19	.39

*Correlations below the diagonal are for the 26 women.

Table 9-A. Honors Students Compared by Sex (Variables 1-12)

Variable	Correlation Coefficient*												80 Men		57 Women	
		2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative			30	75	-14	14	03	05	-01	14	08	17	-09	58.65	7.69	54.98	6.85
2. ACE-Linguistic	28			85	58	45	19	17	15	18	15	11	18	94.24	9.66	97.46	8.78
3. ACE-Total	74	85			32	39	15	14	10	20	14	17	08	152.89	14.03	152.44	12.58
4. Reading-Vocabulary	03	55	40			34	34	22	09	-06	-04	04	17	40.51	7.57	41.81	6.71
5. Reading-Speed	32	39	45	28			50	12	-28	07	04	14	-01	41.93	10.08	44.42	9.19
6. Reading-Accuracy	13	21	22	24	42			36	08	00	07	14	-07	85.50	7.80	86.23	6.67
7. English Proficiency	23	03	15	24	18	28			28	13	00	17	04	36.59	4.22	38.28	3.48
8. GPA	07	37	30	23	06	22	24			15	10	15	16	3.23	.60	3.34	.47
9. HSPR	-06	-05	-07	-12	-10	02	16	11			-08	24	-18	92.63	10.00	92.82	10.81
10. Length Life Story	24	37	39	07	24	04	13	32	-04			-11	06	1.63	.71	1.91	.78
11. Personal Characteristics	02	11	09	20	10	-28	04	-05	-07	24			02	5.30	1.73	5.93	1.78
12. Father's Occup. Level	18	23	26	26	16	32	03	17	-06	05	-08			6.59	1.55	6.96	1.27

*Correlations for the 57 women are below the diagonal.

Table 9-B. Control Students Compared by Sex (Variables 1-12)

Variable	Correlation Coefficient*												128 Men		95 Women	
	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	Mean	SD
1. ACE-Quantitative		34	73	18	35	27	41	28	10	-13	00	08	48.61	8.03	44.32	8.26
2. ACE-Linguistic	36		89	75	72	55	43	31	-01	07	-23	03	73.01	12.24	74.60	13.34
3. ACE-Total	73	90		64	69	53	51	36	04	-11	-17	06	121.62	16.75	118.92	18.08
4. Reading-Vocabulary	17	78	65		53	47	48	35	-05	04	-21	08	25.63	9.66	25.35	9.63
5. Reading-Speed	23	66	59	58		69	50	42	15	-15	-12	-04	26.49	8.38	28.28	8.88
6. Reading-Accuracy	22	49	46	56	70		61	39	09	-07	-11	02	68.65	12.30	72.27	13.25
7. English Proficiency	34	57	57	50	54	60		49	14	04	-06	03	27.78	6.28	29.38	5.81
8. GPA	29	30	35	27	27	36	35		34	00	11	03	2.28	68	2.33	.74
9. HSPR	19	07	14	01	25	23	16	36		-09	25	-16	80.03	15.78	82.38	16.10
10. Length Life Story	08	03	06	-02	-11	-08	10	00	-03		02	-12	1.76	.73	1.81	.65
11. Personal Characteristics	12	08	12	16	12	20	22	32	36	04		-02	4.68	2.15	5.51	1.83
12. Father's Occup. Level	03	-02	00	-02	-02	-06	07	07	-13	-04	-03		6.61	1.60	6.68	1.45

*Correlations below the diagonal are for the 95 women.